

*a1*  
*Conced*

projecting 11a is equal anywhere to a space "d" between the pixel edge section 13a and the second signal line 11j.

**IN THE CLAIMS:**

Please cancel claims 2, 6, 10 and 14.

Please amend claims 1, 3-5, 7-9, 11-13, 15-18, 20, 21, 23, 24, 26 and 27 as follows:

*a2*  
1. (Amended) A liquid crystal display device comprising:

(a) a pixel electrode, wherein said pixel electrode includes a pixel edge section having been exposed to light, at a periphery thereof;

(b) a first signal line extending along one side of said pixel electrode; and

(c) a second signal line extending along the other side of said pixel electrode,  
a first length along which said pixel electrode and said first signal line are adjacent to each other being equal to a second length along which said pixel electrode and said second signal line are adjacent to each other,  
a first space between said pixel edge section and said first signal line being equal to a second space between said pixel edge section and said second signal line.

*a3*  
3. (Amended) The liquid crystal display device as set forth in claim 1, wherein said pixel electrode is formed on a layer in which said first and second signal lines are also formed.

4. (Amended) The liquid crystal display device as set forth in claim 1, wherein said first and second signal lines are formed on a first layer, and said pixel electrode is formed on a second

*a3  
Concl*

layer which is electrically isolated from said first layer by an insulating layer sandwiched between said first and second layers.

5. (Amended) A liquid crystal display device comprising:

- (a) a pixel electrode, wherein said pixel electrode includes a pixel edge section having been exposed to light, at a periphery thereof;
- (b) a first signal line extending along one side of said pixel electrode; and
- (c) a second signal line extending along the other side of said pixel electrode,  
at least one of said first and second signal lines having a projecting portion extending towards said pixel electrode,

a first length along which said pixel electrode and said first signal line are adjacent to each other being equal to a second length along which said pixel electrode and said second signal line are adjacent to each other,

a first space between said pixel edge section and said first signal line being equal to a second space between said pixel edge section and said second signal line.

*a4*

7. (Amended) The liquid crystal display device as set forth in claim 5, wherein said pixel electrode is formed on a layer in which said first and second signal lines are also formed.

8. (Amended) The liquid crystal display device as set forth in claim 5, wherein said first and second signal lines are formed on a first layer, and said pixel electrode is formed on a second layer which is electrically isolated from said first layer by an insulating layer sandwiched between said first and second layers.

*(a4  
cancel)*

9. (Amended) A liquid crystal display device comprising:

- (a) a pixel electrode, wherein said pixel electrode includes a pixel edge section having been exposed to light, at a periphery thereof;
- (b) a thin film transistor located adjacent to said pixel electrode and at one side of said pixel electrode;
- (c) a first signal line extending along said one side of said pixel electrode; and
- (d) a second signal line extending along the other side of said pixel electrode,  
said pixel electrode being formed with a cut-out portion at the other side thereof, said cut-out portion having a length equal to a length along which said first signal line cannot be adjacent to said pixel electrode by said thin film transistor,  
a first length along which said pixel electrode and said first signal line are adjacent to each other being equal to a second length along which said pixel electrode and said second signal line are adjacent to each other,  
a first space between said pixel edge section and said first signal line being equal to a second space between said pixel edge section and said second signal line.

*(x5)*

11. (Amended) The liquid crystal display device as set forth in claim 9, wherein said pixel electrode is formed on a layer in which said first and second signal lines are also formed.

12. (Amended) The liquid crystal display device as set forth in claim 9, wherein said first and second signal lines are formed on a first layer, and said pixel electrode is formed on a second layer which is electrically isolated from said first layer by an insulating layer sandwiched between said first and second layers.

*(a6  
cancel)*

13. (Amended) A liquid crystal display device comprising:

(a) a plurality of pixel electrodes each spaced away from adjacent ones by a predetermined distance, wherein said pixel electrodes include pixel edge sections having been exposed to light, at a periphery thereof;

(b) first signal lines each extending along one side of each of said pixel electrodes, each of said first signal lines having a bending portion which extends along a periphery of each of said pixel electrodes; and

(c) second signal lines each extending along the other side of each of said pixel electrodes, each of said second signal lines having a bending portion which extends along a periphery of each of said pixel electrodes,

at least one of said first and second signal lines having a projecting portion extending towards said pixel electrodes,

a first length along which said pixel electrodes and said first signal lines are adjacent to each other being equal to a second length along which said pixel electrodes and said second signal lines are adjacent to each other,

a first space between said pixel edge sections and said first signal lines being equal to a second space between said pixel edge sections and said second signal lines.

---

15. (Amended) The liquid crystal display device as set forth in claim 13, wherein each of said pixel electrodes is formed on a layer in which said first and second signal lines are also formed.

*As  
Conc'd*

16. (Amended) The liquid crystal display device as set forth in claim 13, wherein said first and second signal lines are formed on a first layer, and said pixel electrodes are formed on a second layer which is electrically isolated from said first layer by an insulating layer sandwiched between said first and second layers.

17. (Amended) A method of fabricating a liquid crystal display device including a pixel electrode, a pixel edge section, a first signal line extending along one side of said pixel electrode, and a second signal line extending along the other side of said pixel electrode, comprising the steps of:

- (a) forming a scanning line on a transparent substrate, and then, forming a gate insulating film on said scanning line and said transparent substrate;
- (b) forming a channel on said gate insulating film above said scanning line;
- (c) forming said first and second signal lines so that a first length along which said pixel electrode and said first signal line are adjacent to each other is equal to a second length along which said pixel electrode and said second signal line are adjacent to each other, and a first space between said pixel edge section and said first signal line is equal to a second space between said pixel edge section and said second signal line,
- (d) forming said pixel electrode and said pixel edge section; and
- (e) covering a product resulting from said step (d) with an insulating film.

18. (Amended) The method as set forth in claim 17, wherein said pixel electrode is formed between said first and second signal lines on a common layer in said step (d).

*a7*  
20. (Amended) A method of fabricating a liquid crystal display device including a pixel electrode, a pixel edge section, a first signal line extending along one side of said pixel electrode, and a second signal line extending along the other side of said pixel electrode, comprising the steps of:

- (a) forming a scanning line on a transparent substrate, and then, forming a gate insulating film on said scanning line and said transparent substrate;
- (b) forming a channel on said gate insulating film above said scanning line;
- (c) forming said first and second signal lines so that at least one of said first and second signal lines has a projecting portion extending towards said pixel electrode and that a first length along which said pixel electrode and said first signal line are adjacent to each other is equal to a second length along which said pixel electrode and said second signal line are adjacent to each other, and a first space between said pixel edge section and said first signal line is equal to a second space between said pixel edge section and said second signal line,
- (d) forming said pixel electrode and said pixel edge section; and
- (e) covering a product resulting from said step (d) with an insulating film.

21. (Amended) The method as set forth in claim 20, wherein said pixel electrode is formed between said first and second signal lines on a common layer in said step (d).

*b8*  
23. (Amended) A method of fabricating a liquid crystal display device including a pixel electrode, a pixel edge section, a first signal line extending along one side of said pixel electrode, and a second signal line extending along the other side of said pixel electrode, comprising the steps of:

*a8  
Concl'd*

(a) forming a scanning line on a transparent substrate, and then, forming a gate insulating film on said scanning line and said transparent substrate;

(b) forming a channel on said gate insulating film above said scanning line;

(c) forming a cut-out portion at the other side of said pixel electrode and forming said first and second signal lines so that said cut-out portion has a length equal to a length along which said first and/or second signal line(s) cannot be adjacent to said pixel electrode by a thin film transistor formed at one side of said pixel electrode,

a first length along which said pixel electrode and said first signal line are adjacent to each other being equal to a second length along which said pixel electrode and said second signal line are adjacent to each other,

a first space between said pixel electrode and said first signal line being equal to a second space between said pixel electrode and said second signal line,

(d) forming said pixel electrode and said pixel edge section; and

(e) covering a product resulting from said step (d) with an insulating film.

24. (Amended) The method as set forth in claim 23, wherein said pixel electrode is formed between said first and second signal lines on a common layer in said step (d).

*a9*

26. (Amended) A method of fabricating a liquid crystal display device including a plurality of pixel electrodes each spaced away from adjacent ones by a predetermined distance, said pixel electrodes having pixel edge sections, first signal lines each extending along one side of each of said pixel electrodes, each of said first signal lines having a bending portion which extends along a periphery of each of said pixel electrodes, and second signal lines each extending along the

*a 9  
Cond. I*

other side of each of said pixel electrodes, each of said second signal lines having a bending portion which extends along a periphery of each of said pixel electrodes, comprising the steps of:

- (a) forming a scanning line on a transparent substrate, and then, forming a gate insulating film on said scanning line and said transparent substrate;
- (b) forming a channel on said gate insulating film above said scanning line;
- (c) forming said first and second signal lines so that at least one of each of said first signal lines and each of second signal lines has a projecting portion extending towards each of said pixel electrodes and that a first length along which each of said pixel electrodes and each of said first signal lines are adjacent to each other is equal to a second length along which each of said pixel electrodes and each of said second signal lines are adjacent to each other, and a first space between each of said pixel edge sections and each of said first signal lines is equal to a second space between each of said pixel edge sections and each of said second signal lines,
- (d) forming said pixel electrodes and said pixel edge sections; and
- (e) covering a product resulting from said step (d) with an insulating film.

27. (Amended) The method as set forth in claim 26, wherein each of said pixel electrodes is formed between each of said first signal lines and each of said second signal lines on a common layer in said step (d).

#### REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Initially, Applicants would like to thank the Examiner for indicating the allowability of claims 9-16 and 23-25.

In the Office Action, the Examiner objects to the drawings under 37 C.F.R. §1.83(a), stating that the drawings must show every feature of the claim, and that the recited feature “at least one of said first and second signal lines has a cut-out portion having a length equal to a length along which said first and/or second signal lines cannot be adjacent to said pixel electrode by a thin film transistor formed at one side of said pixel electrode” of claim 23 must be shown, or the feature cancelled from the claim.

Claim 23 has been amended so it is clear that it is the pixel electrode 13 that has a cut-out portion 15, not the signal lines as previously recited in claim 23. Additionally, the specification provides clear support for the amendment (page 22, lines 12-14), and it is clear in Fig. 11 that the pixel electrode has the cut-out portion. Therefore, the drawings show every feature of the claims, as amended, and it is respectfully requested that the objection to the drawings be withdrawn.

The Examiner objects to the specification stating that it fails to provide proper antecedent basis for the claimed subject matter, and requires correction of the recited limitation “at least one of said first and second signal lines has a cut-out portion having a length equal to a length along which said first and/or second signal lines cannot be adjacent to said pixel electrode by a thin film transistor formed at one side of said pixel electrode” of claim 23. However, claim 23 has been amended as recited above, and therefore, it is submitted that the objection to the specification is moot.

The Examiner rejects claims 1-28 under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner states that claims 1, 5, 9 and 13 are inconsistent with the specification and drawings because the claims recite that the first and second spaces d are equal when the space d is between the first (11i) or second (11j) signal line and the pixel electrode 13,

and that it should be between the signal lines and the pixel edge section 13a. Claims 1, 5, 9 and 13 have been amended so it is clear that the first and second spaces d are equal when the space d is between the first or second signal line, and the pixel edge section, as suggested by the Examiner. Additionally, the specification has been amended to recite that the space "d" is between the pixel edge section and the first and second signal lines. The amendment is consistent with the specification and drawings, therefore, no new matter has been added.

Additionally, the Examiner states that in claims 3, 4, 7, 8, 11, 12, 15, 16, 18, 21, 24 and 27, the phrase "formed in a layer" is confusing because Fig. 8 shows the first and second signal lines, the pixel electrode and the pixel edge section being formed on the gate insulating film while Fig. 10 shows the pixel electrode being formed on an insulating layer. The claims have been amended so it is clear these elements are formed "on" the layers and not "in" them.

The Examiner further states in claims 4, 8, 12 and 16 it is unclear to which layers of Figs. 8 and 10 the recited "first" and "second" layers refer. The claims have been amended as stated above so it is clear the first layer is the one on which the signal lines are formed, and that the second layer is the one on which the pixel electrode is formed. Additionally, Applicants submit that claims 4, 8, 12 and 16 refer to Fig. 10.

The Examiner further rejects claims 17, 20, 23 and 26 under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. Specifically, the Examiner states that the step of forming the pixel edge section 13a is omitted. Accordingly, claims 17, 20, 23 and 26 have been amended to recite this step, as suggested by the Examiner.

The Examiner states that claim 26 is confusing because the structure of the device cited in the preamble doesn't correspond to that recited in step (c). Specifically, the Examiner states

that the "bending portion" recited in the preamble with the "projecting portion" recited in step (c) renders the claim confusing. Applicants respectfully submit that these portions are different, and that the bending portion of the signal lines is different from the extending portion 11a of the signal lines, as is clear from Fig. 12.

The Examiner further states that claims 18, 21, 24 and 27 are inconsistent with the specification and drawings because according to the specification and Figs. 13 and 14, the step of forming the pixel electrode is after the step of forming the first and second signal lines, and that nowhere in the specification or the drawings does it disclose that "the pixel electrode is formed between said first and second signal lines in a common layer in said step (d)". The claims do not recite that the pixel electrode is formed before the signal lines, just that the pixel electrode is formed between the signal lines. It is clear from Figs. 6, 9, 11 and 12 that the pixel electrode is formed between the first and second signal lines, and that Figs. 13 and 14 simply recite method steps. One of ordinary skill in the art would understand that the pixel electrode is formed between the first and second signal lines, and it would be clear from the figures as well.

In view of the above, it is respectfully requested that the §112, second paragraph, rejection of claims 1-28 be withdrawn.

The Examiner rejects claims 1-7, 17, 20 and 26 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 5,502,583 to Sukegawa et al. (hereinafter "Sukegawa"). Claims 4 and 8 are rejected under 35 U.S.C. §103(a) as being allegedly obvious over Sukegawa in view of U.S. Patent No. 5,682,211 to Yao et al. (hereinafter "Yao").

Specifically, the Examiner states Sukegawa discloses the features of independent claims 1, 5, 17, 20 and 26. Regarding claims 1 and 5, Sukegawa discloses a first and second signal line, a pixel electrode, a first and second length and a first and second space. However, Sukegawa

does not disclose the pixel edge section formed by exposing the pixel electrode to light at a periphery thereof. Sukegawa discloses first 18a and second 18a' compensating lines made of a conductive material (Col. 6, lines 10-30), not pixel edge sections formed along the periphery of a pixel electrode, as in the present invention.

Therefore, claims 1, 5, 9 and 13 have been amended to include the limitation that the [pixel electrode includes a pixel edge section having been exposed to light at a periphery thereof.] Regarding claims 17, 20 and 26, they have been amended to include the step of forming a pixel edge section.

Anticipation of a claim under §102 requires that the prior art reference disclose each and every element of the claim to which it is applied. In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986). Thus, there must be no differences between the subject matter of the claim and the disclosure of the applied prior art reference. Therefore, it is respectfully submitted that the rejection of claims 1-7, 17, 20 and 26 under §102(b) is improper because Sukegawa fails to disclose a pixel edge section. It is respectfully requested that the §102(b) rejection be withdrawn, and the claims allowed.

Turning to the §103(a) rejections of dependent claims 4 and 8, it must be noted that the Examiner relies on Sukegawa in combination with Yao, to support the asserted rejections. As set out above, Sukegawa does not disclose all the elements of the independent claims. Accordingly, since dependent claims 4 and 8 recite additional unique elements and/or limitations, claims 4 and 8 remain patentable over the asserted combination since the cited additional reference of Yao does not supply the elements missing from Sukegawa with respect to the independent claims. Therefore, it is respectfully requested that the §103(a) rejection of claims 4 and 8 be withdrawn and respectfully submitted that the claims be allowed.

Attached hereto is a marked-up version of the changes made to the claims and specification by the current amendment. The attached pages are captioned "Version with markings to show changes made."

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorney would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



Paul J. Esatto, Jr.  
Registration No. 30,749

SCULLY, SCOTT, MURPHY & PRESSER  
400 Garden City Plaza  
Garden City, New York 11530  
(516) 742-4343

PJE:AVS:gmj